

FIG. 8A

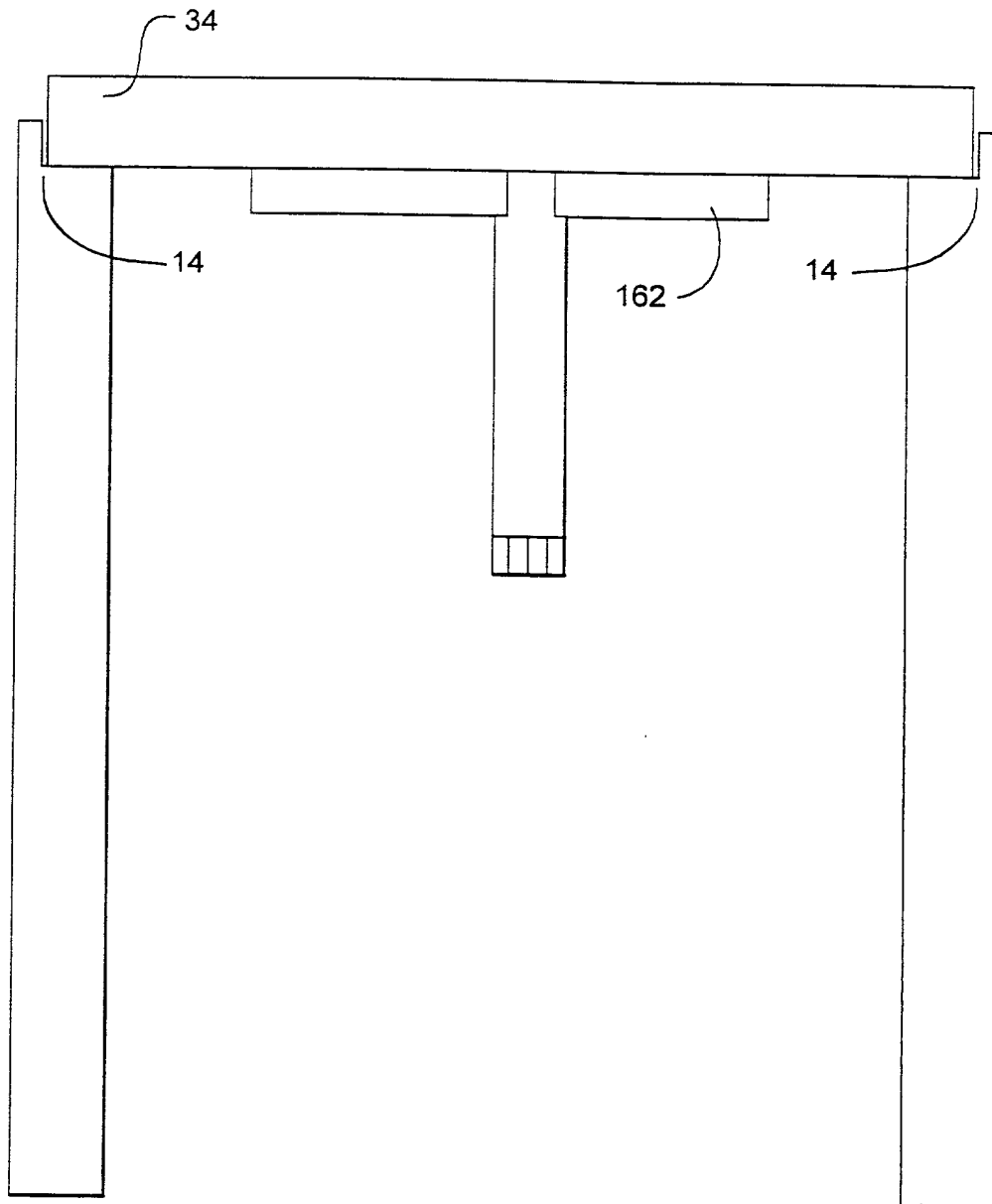


FIG. 8B

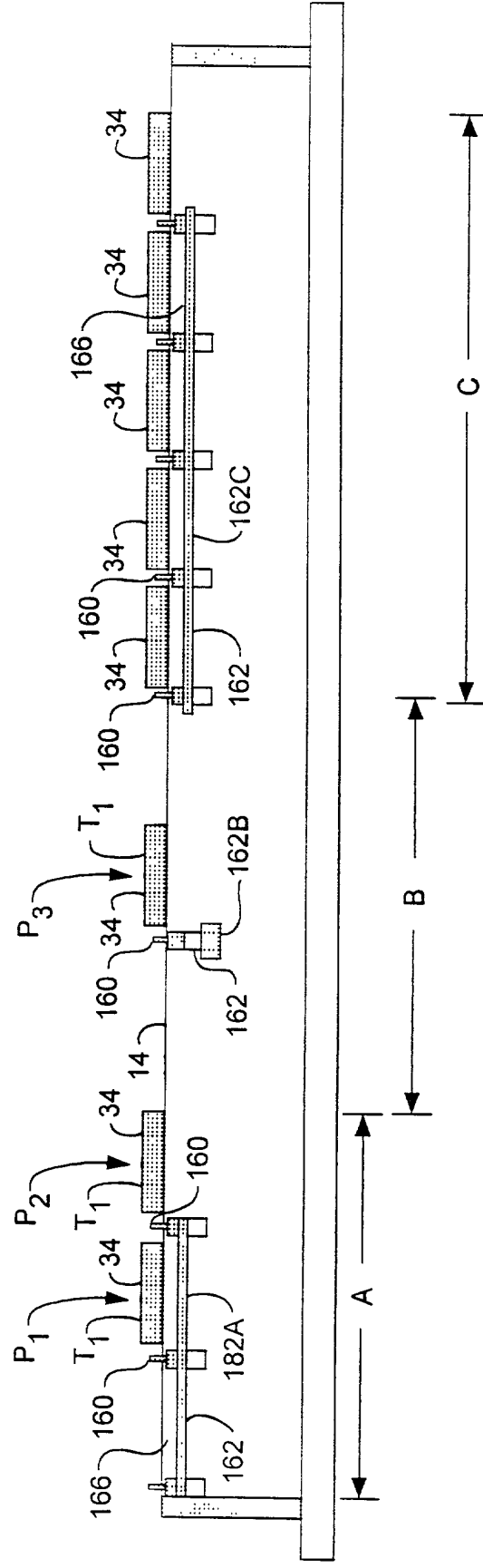


FIG. 8C

## Quik Screen Reagent Formulations

- A1.** 0.8 M Sodium/Potassium Phosphate pH 5.0
- B1.** 1.0 M Sodium/Potassium Phosphate pH 5.0
- C1.** 1.4 M Sodium/Potassium Phosphate pH 5.0
- D1.** 1.8 M Sodium/Potassium Phosphate pH 5.0
- A2.** 0.8 M Sodium/Potassium Phosphate pH 5.6
- B2.** 1.0 M Sodium/Potassium Phosphate pH 5.6
- C2.** 1.4 M Sodium/Potassium Phosphate pH 5.6
- D2.** 1.8 M Sodium/Potassium Phosphate pH 5.6
- A3.** 0.8 M Sodium/Potassium Phosphate pH 6.3
- B3.** 1.0 M Sodium/Potassium Phosphate pH 6.3
- C3.** 1.4 M Sodium/Potassium Phosphate pH 6.3
- D3.** 1.8 M Sodium/Potassium Phosphate pH 6.3
- A4.** 0.8 M Sodium/Potassium Phosphate pH 6.9
- B4.** 1.0 M Sodium/Potassium Phosphate pH 6.9
- C4.** 1.4 M Sodium/Potassium Phosphate pH 6.9
- D4.** 1.8 M Sodium/Potassium Phosphate pH 6.9
- A5.** 0.8 M Sodium/Potassium Phosphate pH 7.5
- B5.** 1.0 M Sodium/Potassium Phosphate pH 7.5
- C5.** 1.4 M Sodium/Potassium Phosphate pH 7.5
- D5.** 1.8 M Sodium/Potassium Phosphate pH 7.5
- A6.** 0.8 M Sodium/Potassium Phosphate pH 8.2
- B6.** 1.0 M Sodium/Potassium Phosphate pH 8.2
- C6.** 1.4 M Sodium/Potassium Phosphate pH 8.2
- D6.** 1.8 M Sodium/Potassium Phosphate pH 8.2

FIG. 9

## Detergent Screen 2 Reagent Formulations

1. 10% v/v Pluronic F-68
2. 10% v/v Anapoe 35
3. 10% v/v Anapoe 56
4. 10% v/v Anapoe 58
5. 10% v/v Anapoe X-114
6. 10% v/v Anapoe X-305
7. 10% v/v Anapoe X-405
8. 10% v/v Anapoe 20
9. 10% v/v Anapoe 80
10. 10% v/v Anapoe C<sub>10</sub>E<sub>6</sub>
11. 10% v/v Anapoe C<sub>10</sub>E<sub>9</sub>
12. 10% v/v Anapoe C<sub>12</sub>E<sub>10</sub>
13. 10% v/v Anapoe C<sub>13</sub>E<sub>6</sub>
14. 10% w/v IPTG
15. 1.5 mM n-Dodecyl-N,N-dimethylglycine
16. 7.0 mM HEGA-10
17. 7.1 mM C<sub>8</sub>E<sub>5</sub>
18. 8.0 mM CHAPS
19. 8.0 mM CHAPSO
20. 11.5 mM C-HEGA 11
21. 39 mM HEGA-9
22. 108 mM C-HEGA 9
23. 109 mM HEGA-8
24. 277 mM C-HEGA-8

**Note:** [mM] is that of the CMC of the detergent

**FIG. 9**  
(Continued)

## Detergent Screen 3 Reagent Formulations

1. 10% w/v BAM
  2. 0.006 mM n-Hexadecyl-b-D-maltoside
  3. 0.1 mM n-Tetradecyl-b-D-maltoside
  4. 0.33 mM n-Tridecyl-b-D-maltoside
  5. 0.9 mM Thesit
  6. 4.0 mM Zwittergent 3-14
  7. 5.9 mM n- Undecyl-b-D-maltoside
  8. 9.0 mM n-Decyl-b-D-thiomaltoside
  9. 15.0 mM FOS-Choline 12
  10. 25 mM n-Decanoylsucrose
  11. 29.0 mM I-S-Nonyl-b-D-thioglucoside
  12. 32.0 mM n-Nonyl-b-D-thiomaltoside
  13. 43.0 mM DDMAB
  14. 60.0 mM n-Nonyl-b-D-maltoside
  15. 76.0 mM Cymal-4
  16. ◇
- 

17. 130 mM FOS-Choline-10
18. 190 mM FOS-Choline-9
19. 250 mM MEGA-9
20. 290 mM I-S-Heptyl-b-D-thioglucoside
21. 1.02 M FOS-Choline-8
22. 1.20 M Cymal-2
23. 3.30 M Zwittergent 3-08
24. 3.40 M Cymal-1

**Note:** [mM] is that of the CMC of the detergent

**FIG. 9**  
(Continued)

## Crystal Screen Reagent Formulations

1. 30% MPD, 0.1 M Na Acetate pH 4.6, 0.02 M Calcium Chloride
2. 0.4 M K, Na Tartrate
3. 0.4 M Ammonium Phosphate
4. 2.0 Ammonium Sulfate, 0.1 M Tris HCl pH 8.5
5. 30% MPD, 0.1 M Na Hepes pH 7.5, 0.2 M Na Citrate
6. 30% PEG 4000, 0.1 M Tris HCl pH 8.5, 0.2 M Mg Chloride
7. 1.4 M Na Acetate, 0.1 M Na Cacodylate pH 6.5
8. 30% 2-Propanol, 0.1 M Na Cacodylate pH 6.5, 0.2 M Na Citrate
9. 30% PEG 4000, 0.1 M Na Citrate pH 5.6, 0.2 Ammonium Acetate
10. 30% PEG 4000, 0.1 M Na Acetate pH 4.6, 0.2 M Ammonium Acetate
11. 1.0 M Ammonium Phosphate, 0.1 M Na Citrate pH 5.6
12. 30% 2-Propanol, 0.1 M Na Hepes pH 7.5, 0.2 M Mg Chloride
13. 30% PEG 400, 0.1 M Tris HCl pH 8.5, 0.2 M Na Citrate
14. 28% PEG 400, 0.1 M Na Hepes pH 7.5, 0.2 M Ca Chloride
15. 30% PEG 8000, 0.1 M Na Cacodylate pH 6.5, 0.2 M Ammonium Sulfate
16. 1.5 M Li Sulfate, 0.1 M Na Hepes pH 7.5
17. 30% PEG 4000, 0.1 M Tris HCl pH 8.5, 0.2 M Li Sulfate
18. 20% PEG 8000, 0.1 M Na Cacodylate pH 6.5, 0.2 M Mg Acetate
19. 30% 2-Propanol, 0.1 M Tris HCl pH 8.5, 0.2 M Ammonium Acetate
20. 25% PEG 4000, 0.1 M Na Acetate pH 4.6, 0.2 M Ammonium Sulfate
21. 30% MPD, 0.1 M Na Cacodylate pH 6.5, 0.2 M Mg Acetate
22. 30% PEG 4000, 0.1 M Tris HCl pH 8.5, 0.2 M Na Acetate
23. 30% PEG 400, 0.1 M Na Hepes pH 7.5, 0.2 M Mg Chloride
24. 20% 2-Propanol, 0.1 M Na Acetate pH 4.6, 0.2 M Ca Chloride

**FIG. 9**  
(Continued)

## Crystal Screen Reagent Formulations

25. 1.0 M Na Acetate, 0.1 M Imidazole pH 6.5
26. 30% MPD, 0.1 M Na Citrate pH 5.6, 0.2 M Ammonium Acetate
27. 20% 2-Propanol, 0.1 M Na Hepes pH 7.5, 0.2 M Na Citrate
28. 30% PEG 8000, 0.1 M Na Cacodylate pH 6.5, 0.2 M Na Acetate
29. 0.8 M K, Na Tartrate, 0.1 M Na Hepes pH 7.5
30. 30% PEG 8000, 0.2 M Ammonium Sulfate
31. 30% PEG 4000, 0.2 M Ammonium Sulfate
32. 2.0 M Ammonium Sulfate
33. 4.0 M Na Formate
34. 2.0 M Na Formate, 0.1 M Na Acetate pH 4.6
35. 1.6 M Na, K Phosphate, 0.1 M Na Hepes pH 7.5
36. 8% PEG 8000, 0.1 M Tris HCl pH 8.5
37. 8% PEG 4000, 0.1 M Na Acetate pH 4.6
38. 1.4 M Na Citrate, 0.1 M Na Hepes pH 7.5
39. 2% PEG 400, 2.0 M Ammonium Sulfate, 0.1 M Na Hepes pH 7.5
40. 20% 2-Propanol, 20% PEG 4000, 0.1 M Na Citrate pH 5.6
41. 10% 2-Propanol, 20% PEG 4000, 0.1 M Na Hepes pH 7.5
42. 20% PEG 8000, 0.05 M K Phosphate
43. 30% PEG 1500
44. 0.2 M Mg Formate
45. 18% PEG 8000, 0.1 M Na Cacodylate pH 6.5, 0.2 M Zn Acetate
46. 18% PEG 8000, 0.1 M Na Cacodylate pH 6.5, 0.2 M Ca Acetate
47. 2.0 M Ammonium Sulfate, 0.1 M Na Acetate pH 4.6
48. 2.0 M Ammonium Phosphate, 0.1 M Tris HCl pH 8.5

**FIG. 9**  
(Continued)



## Grid Screen Ammonium Sulfate Reagent Formulations

- A1.** 0.1 M Citric Acid pH 4.0, 0.8 M Ammonium Sulfate  
**B1.** 0.1 M Citric Acid pH 4.0, 1.6 M Ammonium Sulfate  
**C1.** 0.1 M Citric Acid pH 4.0, 2.4 M Ammonium Sulfate  
**D1.** 0.1 M Citric Acid pH 4.0, 3.2 M Ammonium Sulfate  
**A2.** 0.1 M Citric Acid pH 5.0, 0.8 M Ammonium Sulfate  
**B2.** 0.1 M Citric Acid pH 5.0, 1.6 M Ammonium Sulfate  
**C2.** 0.1 M Citric Acid pH 5.0, 2.4 M Ammonium Sulfate  
**D2.** 0.1 M Citric Acid pH 5.0, 3.2 M Ammonium Sulfate  
**A3.** 0.1 M MES pH 6.0, 0.8 M Ammonium Sulfate  
**B3.** 0.1 M MES pH 6.0, 1.6 M Ammonium Sulfate  
**C3.** 0.1 M MES pH 6.0, 2.4 M Ammonium Sulfate  
**D3.** 0.1 M MES pH 6.0, 3.2 M Ammonium Sulfate  
**A4.** 0.1 M HEPES pH 7.0, 0.8 M Ammonium Sulfate  
**B4.** 0.1 M HEPES pH 7.0, 1.6 M Ammonium Sulfate  
**C4.** 0.1 M HEPES pH 7.0, 2.4 M Ammonium Sulfate  
**D4.** 0.1 M HEPES pH 7.0, 3.2 M Ammonium Sulfate  
**A5.** 0.1 M Tris pH 8.0, 0.8 M Ammonium Sulfate  
**B5.** 0.1 M Tris pH 8.0, 1.6 M Ammonium Sulfate  
**C5.** 0.1 M Tris pH 8.0, 2.4 M Ammonium Sulfate  
**D5.** 0.1 M Tris pH 8.0, 3.2 M Ammonium Sulfate  
**A6.** 0.1 M Bicine pH 9.0, 0.8 M Ammonium Sulfate  
**B6.** 0.1 M Bicine pH 9.0, 1.6 M Ammonium Sulfate  
**C6.** 0.1 M Bicine pH 9.0, 2.4 M Ammonium Sulfate  
**D6.** 0.1 M Bicine pH 9.0, 3.2 M Ammonium Sulfate

**FIG. 9**  
(Continued)

## Grid Screen MPD Reagent Formulations

- A1.** 0.1 M Citric Acid pH 4.0, 10% 2-Methyl-2,4-pentanediol  
**B1.** 0.1 M Citric Acid pH 4.0, 20% 2-Methyl-2,4-pentanediol  
**C1.** 0.1 M Citric Acid pH 4.0, 40% 2-Methyl-2,4-pentanediol  
**D1.** 0.1 M Citric Acid pH 4.0, 65% 2-Methyl-2,4-pentanediol  
**A2.** 0.1 M Sodium Acetate trihydrate pH 5.0, 10% 2-Methyl-2,4-pentanediol  
**B2.** 0.1 M Sodium Acetate trihydrate pH 5.0, 20% 2-Methyl-2,4-pentanediol  
**C2.** 0.1 M Sodium Acetate trihydrate pH 5.0, 40% 2-Methyl-2,4-pentanediol  
**D2.** 0.1 M Sodium Acetate trihydrate pH 5.0, 65% 2-Methyl-2,4-pentanediol  
**A3.** 0.1 M MES pH 6.0, 10% 2-Methyl-2,4-pentanediol  
**B3.** 0.1 M MES pH 6.0, 20% 2-Methyl-2,4-pentanediol  
**C3.** 0.1 M MES pH 6.0, 40% 2-Methyl-2,4-pentanediol  
**D3.** 0.1 M MES pH 6.0, 65% 2-Methyl-2,4-pentanediol  
**A4.** 0.1 M HEPES pH 7.0, 10% 2-Methyl-2,4-pentanediol  
**B4.** 0.1 M HEPES pH 7.0, 20% 2-Methyl-2,4-pentanediol  
**C4.** 0.1 M HEPES pH 7.0, 40% 2-Methyl-2,4-pentanediol  
**D4.** 0.1 M HEPES pH 7.0, 65% 2-Methyl-2,4-pentanediol  
**A5.** 0.1 M Tris pH 8.0, 10% 2-Methyl-2,4-pentanediol  
**B5.** 0.1 M Tris pH 8.0, 20% 2-Methyl-2,4-pentanediol  
**C5.** 0.1 M Tris pH 8.0, 40% 2-Methyl-2,4-pentanediol  
**D5.** 0.1 M Tris pH 8.0, 65% 2-Methyl-2,4-pentanediol  
**A6.** 0.1 M Bicine pH 9.0, 10% 2-Methyl-2,4-pentanediol  
**B6.** 0.1 M Bicine pH 9.0, 20% 2-Methyl-2,4-pentanediol  
**C6.** 0.1 M Bicine pH 9.0, 40% 2-Methyl-2,4-pentanediol  
**D6.** 0.1 M Bicine pH 9.0, 65% 2-Methyl-2,4-pentanediol

**FIG. 9**  
(Continued)

## Grid Screen Sodium Chloride Reagent Formulations

- A1.** 0.1 M Citric Acid pH 4.0, 1.0 M Sodium Chloride
- B1.** 0.1 M Citric Acid pH 4.0, 2.0 M Sodium Chloride
- C1.** 0.1 M Citric Acid pH 4.0, 3.0 M Sodium Chloride
- D1.** 0.1 M Citric Acid pH 4.0, 4.0 M Sodium Chloride
- A2.** 0.1 M Citric Acid pH 5.0, 1.0 M Sodium Chloride
- B2.** 0.1 M Citric Acid pH 5.0, 2.0 M Sodium Chloride
- C2.** 0.1 M Citric Acid pH 5.0, 3.0 M Sodium Chloride
- D2.** 0.1 M Citric Acid pH 5.0, 4.0 M Sodium Chloride
- A3.** 0.1 M MES pH 6.0, 1.0 M Sodium Chloride
- B3.** 0.1 M MES pH 6.0, 2.0 M Sodium Chloride
- C3.** 0.1 M MES pH 6.0, 3.0 M Sodium Chloride
- D3.** 0.1 M MES pH 6.0, 4.0 M Sodium Chloride
- A4.** 0.1 M HEPES pH 7.0, 1.0 M Sodium Chloride
- B4.** 0.1 M HEPES pH 7.0, 2.0 M Sodium Chloride
- C4.** 0.1 M HEPES pH 7.0, 3.0 M Sodium Chloride
- D4.** 0.1 M HEPES pH 7.0, 4.0 M Sodium Chloride
- A5.** 0.1 M Tris pH 8.0, 1.0 M Sodium Chloride
- B5.** 0.1 M Tris pH 8.0, 2.0 M Sodium Chloride
- C5.** 0.1 M Tris pH 8.0, 3.0 M Sodium Chloride
- D5.** 0.1 M Tris pH 8.0, 4.0 M Sodium Chloride
- A6.** 0.1 M Bicine pH 9.0, 1.0 M Sodium Chloride
- B6.** 0.1 M Bicine pH 9.0, 2.0 M Sodium Chloride
- C6.** 0.1 M Bicine pH 9.0, 3.0 M Sodium Chloride
- D6.** 0.1 M Bicine pH 9.0, 4.0 M Sodium Chloride

**FIG. 9**  
(Continued)

## Grid Screen PEG 6000 Reagent Formulations

- A1.** 0.1 M Citric Acid pH 4.0, 5% Polyethylene Glycol 6000
- B1.** 0.1 M Citric Acid pH 4.0, 10% Polyethylene Glycol 6000
- C1.** 0.1 M Citric Acid pH 4.0, 20% Polyethylene Glycol 6000
- D1.** 0.1 M Citric Acid pH 4.0, 30% Polyethylene Glycol 6000
- A2.** 0.1 M Citric Acid pH 5.0, 5% Polyethylene Glycol 6000
- B2.** 0.1 M Citric Acid pH 5.0, 10% Polyethylene Glycol 6000
- C2.** 0.1 M Citric Acid pH 5.0, 20% Polyethylene Glycol 6000
- D2.** 0.1 M Citric Acid pH 5.0, 30% Polyethylene Glycol 6000
- A3.** 0.1 M MES pH 6.0, 5% Polyethylene Glycol 6000
- B3.** 0.1 M MES pH 6.0, 10% Polyethylene Glycol 6000
- C3.** 0.1 M MES pH 6.0, 20% Polyethylene Glycol 6000
- D3.** 0.1 M MES pH 6.0, 30% Polyethylene Glycol 6000
- A4.** 0.1 M HEPES pH 7.0, 5% Polyethylene Glycol 6000
- B4.** 0.1 M HEPES pH 7.0, 10% Polyethylene Glycol 6000
- C4.** 0.1 M HEPES pH 7.0, 20% Polyethylene Glycol 6000
- D4.** 0.1 M HEPES pH 7.0, 30% Polyethylene Glycol 6000
- A5.** 0.1 M Tris pH 8.0, 5% Polyethylene Glycol 6000
- B5.** 0.1 M Tris pH 8.0, 10% Polyethylene Glycol 6000
- C5.** 0.1 M Tris pH 8.0, 20% Polyethylene Glycol 6000
- D5.** 0.1 M Tris pH 8.0, 30% Polyethylene Glycol 6000
- A6.** 0.1 M Bicine pH 9.0, 5% Polyethylene Glycol 6000
- B6.** 0.1 M Bicine pH 9.0, 10% Polyethylene Glycol 6000
- C6.** 0.1 M Bicine pH 9.0, 20% Polyethylene Glycol 6000
- D6.** 0.1 M Bicine pH 9.0, 30% Polyethylene Glycol 6000

**FIG. 9**  
(Continued)

## Grid Screen PEG/LiCl Reagent Formulations

- A1.** 0.1 M Citric Acid pH 4.0, 1.0 M Lithium Chloride  
**B1.** 0.1 M Citric Acid pH 4.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C1.** 0.1 M Citric Acid pH 4.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D1.** 0.1 M Citric Acid pH 4.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**A2.** 0.1 M Citric Acid pH 5.0, 1.0 M Lithium Chloride  
**B2.** 0.1 M Citric Acid pH 5.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C2.** 0.1 M Citric Acid pH 5.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D2.** 0.1 M Citric Acid pH 5.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**A3.** 0.1 M MES pH 6.0, 1.0 M Lithium Chloride  
**B3.** 0.1 M MES pH 6.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C3.** 0.1 M MES pH 6.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D3.** 0.1 M MES pH 6.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**A4.** 0.1 M HEPES pH 7.0, 1.0 M Lithium Chloride  
**B4.** 0.1 M HEPES pH 7.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C4.** 0.1 M HEPES pH 7.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D4.** 0.1 M HEPES pH 7.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**A5.** 0.1 M Tris pH 8.0, 1.0 M Lithium Chloride  
**B5.** 0.1 M Tris pH 8.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C5.** 0.1 M Tris pH 8.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D5.** 0.1 M Tris pH 8.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**A6.** 0.1 M Bicine pH 9.0, 1.0 M Lithium Chloride  
**B6.** 0.1 M Bicine pH 9.0, 10% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**C6.** 0.1 M Bicine pH 9.0, 20% Polyethylene Glycol 6000, 1.0 M Lithium Chloride  
**D6.** 0.1 M Bicine pH 9.0, 30% Polyethylene Glycol 6000, 1.0 M Lithium Chloride

**FIG. 9**  
(Continued)

## PEG/Ion Screen Reagent Formulations

1. 0.2 M Sodium Fluoride, 20% PEG 3350
2. 0.2 M Potassium Fluoride, 20% PEG 3350
3. 0.2 M Ammonium Fluoride, 20% PEG 3350
4. 0.2 M Lithium Chloride, 20% PEG 3350
5. 0.2 M Magnesium Chloride, 20% PEG 3350
6. 0.2 M Sodium Chloride, 20% PEG 3350
7. 0.2 M Calcium Chloride, 20% PEG 3350
8. 0.2 M Potassium Chloride, 20% PEG 3350
9. 0.2 M Ammonium Chloride, 20% PEG 3350
10. 0.2 M Sodium Iodide, 20% PEG 3350
11. 0.2 M Potassium Iodide, 20% PEG 3350
12. 0.2 M Ammonium Iodide, 20% PEG 3350
13. 0.2 M Sodium Thiocyanate, 20% PEG 3350
14. 0.2 M Potassium Thiocyanate, 20% PEG 3350
15. 0.2 M Lithium Nitrate, 20% PEG 3350
16. 0.2 M Magnesium Nitrate, 20% PEG 3350
17. 0.2 M Sodium Nitrate, 20% PEG 3350
18. 0.2 M Potassium Nitrate, 20% PEG 3350
19. 0.2 M Ammonium Nitrate, 20% PEG 3350
20. 0.2 M Magnesium Formate, 20% PEG 3350
21. 0.2 M Sodium Formate, 20% PEG 3350
22. 0.2 M Potassium Formate, 20% PEG 3350
23. 0.2 M Ammonium Formate, 20% PEG 3350
24. 0.2 M Lithium Acetate, 20% PEG 3350

**FIG. 9**  
(Continued)

## PEG/Ion Screen Reagent Formulations

25. 0.2 M Magnesium Acetate, 20% PEG 3350
26. 0.2 M Zinc Acetate, 20% PEG 3350
27. 0.2 M Sodium Acetate, 20% PEG 3350
28. 0.2 M Calcium Acetate, 20% PEG 3350
29. 0.2 M Potassium Acetate, 20% PEG 3350
30. 0.2 M Ammonium Acetate, 20% PEG 3350
31. 0.2 M Lithium Sulfate, 20% PEG 3350
32. 0.2 M Magnesium Sulfate, 20% PEG 3350
33. 0.2 M Sodium Sulfate, 20% PEG 3350
34. 0.2 M Potassium Sulfate, 20% PEG 3350
35. 0.2 M Ammonium Sulfate, 20% PEG 3350
36. 0.2 M di-Sodium Tartrate, 20% PEG 3350
37. 0.2 M Potassium Sodium Tartrate, 20% PEG 3350
38. 0.2 M di-Ammonium Tartrate, 20% PEG 3350
39. 0.2 M Sodium dihydrogen Phosphate, 20% PEG 3350
40. 0.2 M di-Sodium hydrogen Phosphate, 20% PEG 3350
41. 0.2 M Potassium dihydrogen Phosphate, 20% PEG 3350
42. 0.2 M di-Potassium hydrogen Phosphate, 20% PEG 3350
43. 0.2 M Ammonium dihydrogen Phosphate, 20% PEG 3350
44. 0.2 M di-Ammonium hydrogen Phosphate, 20% PEG 3350
45. 0.2 M tri-Lithium Citrate, 20% PEG 3350
46. 0.2 M tri-Sodium Citrate, 20% PEG 3350
47. 0.2 M tri-Potassium Citrate, 20% PEG 3350
48. 0.2 M di-Ammonium hydrogen Citrate, 20% PEG 3350

**FIG. 9**  
(Continued)

## MembFac Reagent Formulations

1. 12% MPD, 0.1 M Na Acetate pH 4.6, 0.1 M Na Chloride
2. 12% PEG 4000, 0.1 M Na Acetate pH 4.6, 0.1 M Zn Acetate
3. 10% PEG 4000, 0.1 M Na Acetate pH 4.6, 0.2 M Ammonium Sulfate
4. 12% Isopropanol, 0.1 M Na Acetate pH 4.6, 0.1 M Na Chloride
5. 12% PEG 4000, 0.1 M Na Acetate pH 4.6
6. 1.0 M Ammonium Sulfate, 0.1 M Na Acetate pH 4.6
7. 1.0 M Mg Sulfate, 0.1 M Na Acetate pH 4.6
8. 18% PEG 400, 0.1 M Na Acetate pH 4.6, 0.1 M Mg Chloride
9. 1.0 M Ammonium Phosphate, 0.1 M Na Acetate pH 4.6, 0.1 M Li Sulfate
10. 12% PEG 6000, 0.1 M Na Acetate pH 4.6, 0.1 M Na Chloride
11. 12% PEG 6000, 0.1 M Na Acetate pH 4.6, 0.1 M Mg Chloride
12. 18% PEG 400, 0.1 M Na Citrate pH 5.6, 0.1 M Na Chloride
13. 12% PEG 4000, 0.1 M Na Citrate pH 5.6, 0.1 M Li Sulfate
14. 10% Isopropanol, 0.1 M Na Citrate pH 5.6, 0.1 M Na Citrate
15. 12% MPD, 0.1 M Na Citrate pH 5.6, 0.1 M Na Chloride
16. 1.0 M Mg Sulfate, 0.1 M Na Citrate pH 5.6
17. 12% PEG 4000, 0.1 M Na Citrate pH 5.6, 0.1 M Na Chloride
18. 12% PEG 6000, 0.1 M Na Citrate pH 5.6, 0.1 M Li Sulfate
19. 4% MPD, 0.1 M Na Citrate pH 5.6, 0.1 M Mg Chloride
20. 0.1 M Na Chloride, 0.1 M Na Citrate pH 5.6
21. 4% PEG 400, 0.1 M Na Citrate pH 5.6, 0.1 M Li Sulfate
22. 1.0 M Ammonium Sulfate, 0.1 M ADA pH 6.5
23. 12% PEG 4000 2% Isopropanol, 0.1 M ADA pH 6.5, 0.1 M Li Sulfate
24. 1.0 M di-Ammonium Phosphate, 0.1 M ADA pH 6.5

**FIG. 9**  
(Continued)



## MembFac Reagent Formulations

- 25.** 12% PEG 6000, 0.1 M ADA pH 6.5, 0.1 M Mg Chloride
- 26.** 12% MPD, 0.1 M ADA pH 6.5
- 27.** 1.0 M Mg Sulfate, 0.1 M ADA pH 6.5, 0.1 M Li Sulfate
- 28.** 4% PEG 400, 0.1 M ADA pH 6.5, 0.3 M Li Sulfate
- 29.** 1.0 M di-Na/K Phosphate, 0.1 Na Hepes pH 7.5, 0.1 M Ammonium Sulfate
- 30.** 10% PEG 4000, 0.1 Na Hepes pH 7.5, 0.1 M Na Chloride
- 31.** 18% PEG 400, 0.1 Na Hepes pH 7.5, 0.1 M Mg Chloride
- 32.** 1.0 M K/Na Tartrate, 0.1 Na Hepes pH 7.5
- 33.** 18% PEG 400, 0.1 Na Hepes pH 7.5, 0.1 M Ammonium Sulfate
- 34.** 10% PEG 4000, 0.1 Na Hepes pH 7.5, 0.1 M Ammonium Sulfate
- 35.** 12% MPD, 0.1 Na Hepes pH 7.5, 0.1 M Na Citrate
- 36.** 1.0 M Na Citrate, 0.1 Na Hepes pH 7.5
- 37.** 4% PEG 400, 0.1 Na Hepes pH 7.5, 0.6 M Mg Sulfate
- 38.** 4% MPD, 0.1 Na Hepes pH 7.5, 0.6 M Mg Sulfate
- 39.** 0.1 M K/Na Tartrate, 0.1 Na Hepes pH 7.5, 0.1 M Li Sulfate
- 40.** 12% MPD, 0.1 M Tris HCl pH 8.5, 0.1 M Li Sulfate
- 41.** 0.5 M di-Na/K Phosphate, 0.1 Tris HCl pH 8.5, 0.1 Ammonium Phosphate
- 42.** 0.1 M Na Acetate, 0.1 Tris HCl pH 8.5
- 43.** 0.1 M Na Chloride, 0.1 Tris HCl pH 8.5
- 44.** 12% PEG 6000, 0.1 Tris HCl pH 8.5, 0.1 M Ammonium Phosphate
- 45.** 0.4 M Mg Sulfate, 0.1 Tris HCl pH 8.5, 0.1 M K/Na Tartrate
- 46.** 0.2 M Li Sulfate, 0.1 Tris HCl pH 8.5
- 47.** 0.5 M Ammonium Sulfate, 0.1 Tris HCl pH 8.5
- 48.** 5% PEG 400, 0.1 Tris HCl pH 8.5, 0.1 M Na Citrate

**FIG. 9**  
(Continued)

## Detergent Screen 1 Reagent Formulations

1. 0.08 mM  $C_{12}E_9$
2. 0.11 mM  $C_{12}E_8$
3. 0.17 mM n-Dodecyl-b-D-maltoside
4. 0.20 mM Sucrose monolaurate
5. 0.56 mM CYMAL-6
6. 0.90 mM TRITON X-100
7. 1.00 mM CTAB
8. 1.40 mM Deoxy BigChap
9. 1.80 mM n-Decyl-b-D-maltoside
10. 2.00 mM LDAO
11. 2.40 mM CYMAL-5
12. 4.00 mM ZWITTERGENT 3-12
13. 6.50 mM Nonyl-b-D-glucoside
14. 9.00 mM l-S-octyl-b-D-thioglucoside
15. 10.4 mM DDAO
16. 19.5 mM HECAMEG
17. 24.4 mM n-Octanoylsucrose
18. 30.0 mM Heptyl-b-D-thioglucoside
19. 24.5 mM n-Octyl-b-D-glucoside
20. 34.5 mM CYMAL-3
21. 35.0 mM C-HEGA-10
22. 40.0 mM ZWITTERGENT 3-10
23. 79.0 mM MEGA-8
24. 250.0 mM n-Hexyl-b-D-glucoside

**Note:** [mM] is that of the CMC of the detergent

**FIG. 9**  
(Continued)

## Crystal Screen Cryo Reagent Formulations

1. 30% MPD, 0.1 M Na Acetate pH 4.6, 0.02 M Calcium Chloride
2. 0.26 M K, Na Tartrate, 35% Glycerol
3. 0.26 M Ammonium Phosphate, 35% Glycerol
4. 1.5 M Ammonium Sulfate, 0.075 M Tris HCl pH 8.5, 25% Glycerol
5. 30% MPD, 0.1 M Sodium Hepes pH 7.5, 0.2 M sodium Citrate
6. 24% PEG 4000, 0.08 M Tris HCl pH 8.5, 0.16 M Magnesium Chloride, 20% Glycerol
7. 0.98 M Sodium Acetate, 0.07 M Na Cacodylate pH 6.5, 30% Glycerol
8. 21% iso-Propanol, 0.07 M Na Cacodylate pH 6.5, 0.14 M Sodium Citrate, 30% Glycerol
9. 25.5% PEG 4000, 0.085 M Na Citrate pH 5.6, 0.17 M Ammonium Acetate, 15% Glycerol
10. 25.5% PEG 4000, 0.085 M Na Acetate pH 4.6, 0.17 M Ammonium Acetate, 15% Glycerol
11. 0.7 M Ammonium Phosphate, 0.07 M Na Citrate pH 5.6, 30% Glycerol
12. 27% iso-Propanol, 0.09 M Na Hepes pH 7.5, 0.18 M Magnesium Chloride, 10% Glycerol
13. 30% PEG 400, 0.1 M Tris HCl pH 8.5, 0.2 M Sodium Citrate
14. 26.6% PEG 400, 0.095 M Na Hepes pH 7.5, 0.19 M Calcium Chloride, 5% Glycerol
15. 25.5% PEG 8000, 0.085 M Na Cacodylate pH 6.5, 0.17 M Ammonium Sulfate, 15 % Glycerol
16. 1.125 M Lithium Sulfate, 0.075 M Na Hepes pH 7.5, 25% Glycerol
17. 25.5% PEG 4000, 0.085 M Tris HCl pH 8.5, 0.17 M Lithium Sulfate, 15% Glycerol
18. 16% PEG 8000, 0.08 M Na Cacodylate pH 6.5, 0.16 M Magnesium Acetate, 20% Glycerol
19. 24% iso-Propanol, 0.08 M Tris HCl pH 8.5, 0.16 M Ammonium Acetate, 20% Glycerol
20. 20% PEG 4000, 0.08 M Na Acetate pH 4.6, 0.16 M Ammonium Sulfate, 20% Glycerol
21. 30% MPD, 0.1 M Na Cacodylate pH 6.5, 0.2 M Magnesium Acetate
22. 25.5% PEG 4000, 0.085 M Tris HCl pH 8.5, 0.17 M Sodium Acetate, 15% Glycerol
23. 30% PEG 400, 0.1 M NA Hepes pH 7.5, 0.2 M Magnesium Chloride
24. 14% iso-Propanol, 0.07 M Na Acetate pH 4.6, 0.14 M Calcium Chloride, 30% Glycerol

**FIG. 9**  
(Continued)

## Crystal Screen Cryo Reagent Formulations

- 25.** 0.7 M Sodium Acetate, 0.07 M Imidazole pH 6.5, 30% Glycerol
- 26.** 30% MPD, 0.1 M Na Citrate pH 5.6, 0.2 M Ammonium Acetate
- 27.** 14% iso- Propanol, 0.07 M NA Hepes pH 7.5, 0.14 M Sodium Citrate, 30% Glycerol
- 28.** 25.5% PEG 8000, 0.085 M Na Cacodylate pH 6.5, 0.17 M Sodium Acetate, 15% Glycerol
- 29.** 0.52 M K, Na Tartrate, 0.065 M Na Hepes pH 7.5, 35% Glycerol
- 30.** 25.5% PEG 8000, 0.17 M Ammonium Sulfate, 15% Glycerol
- 31.** 25.5% PEG 4000, 0.17 M Ammonium Sulfate, 15% Glycerol
- 32.** 1.5 M Ammonium Sulfate, 25% Glycerol
- 33.** 3.6 M Sodium Formate, 10% Glycerol
- 34.** 1.4 M Sodium Formate, 0.07 M Na Acetate pH 4.6, 30% Glycerol
- 35.** 1.2 M Na, K Phosphate, 0.075 M Na Hepes pH 7.5, 25% Glycerol
- 36.** 5.2% PEG 8000, 0.065 M Tris Hcl pH 8.5, 35% Glycerol
- 37.** 5.6% PEG 4000, 0.07 M Na Acetate pH 4.6, 30% Glycerol
- 38.** 1.26 M Sodium Citrate, 0.09 M Na Hepes pH 7.5, 10% Glycerol
- 39.** 1.7% PEG 400, 0.085 M Na Hepes pH 7.5, 1.7 M Ammonium Sulfate, 15% Glycerol
- 40.** 19% iso-Propanol, 0.095 M Na Citrate pH 5.6, 19% PEG 4000, 5% Glycerol
- 41.** 8.5% iso-Propanol, 0.085 M Na Hepes pH 7.5, 17% PEG 4000, 15% Glycerol
- 42.** 16% PEG 8000, 0.04 M Potassium Phosphate, 20% Glycerol
- 43.** 24% PEG 1500, 20% Glycerol
- 44.** 0.1 M Magnesium Formate, 50% Glycerol
- 45.** 14.4% PEG 8000, 0.08 M Na Cacodylate pH 6.5, 0.16 M Zinc Acetate, 20% Glycerol
- 46.** 14.4% PEG 8000, 0.08 M Na Cacodylate pH 6.5, 0.16 M Calcium Acetate, 20% Glycerol
- 47.** 1.6 M Ammonium Sulfate, 0.08 M Na Acetate pH 4.6, 20% Glycerol
- 48.** 1.6 M Ammonium Phosphate, 0.08 M Tris HCl pH 8.5, 20% Glycerol

**FIG. 9**  
(Continued)

# Low Ionic Strength Screen Reagent Formulations

## Buffers

1. 0.05 M Potassium chloride pH 2.0
2. 0.05 M Citric acid pH 3.0
3. 0.05 M Citric acid pH 3.5
4. 0.05 M Citric acid pH 4.0
5. 0.05 M Citric acid pH 4.5
6. 0.05 M Citric acid pH 5.0
7. 0.05 M Citric acid pH 5.5
8. 0.05 M MES pH 6.0
9. 0.05 M Bis-Tris pH 6.5
10. 0.05 M Imidazole pH 7.0
11. 0.05 M Hepes pH 7.5
12. 0.05 M Tris pH 8.0
13. 0.05 M Tris pH 8.5
14. 0.05 M Glycine pH 9.0
15. 0.05 M Glycine pH 9.5
16. 0.05 M Glycine pH 10.0
17. 0.05 M di-sodium hydrogen phosphate pH 11.0
18. 0.05 M di-sodium hydrogen phosphate pH 12.0

## Precipitants

- A. 4% w/v Polyethylene glycol 3350
- B. 8% w/v Polyethylene glycol 3350
- C. 12% w/v Polyethylene glycol 3350
- D. 16% w/v Polyethylene glycol 3350
- E. 20% w/v Polyethylene glycol 3350
- F. 24% w/v Polyethylene glycol 3350

## Dehydrant

24% w/v Polyethylene glycol 3350

**FIG. 9**  
(Continued)

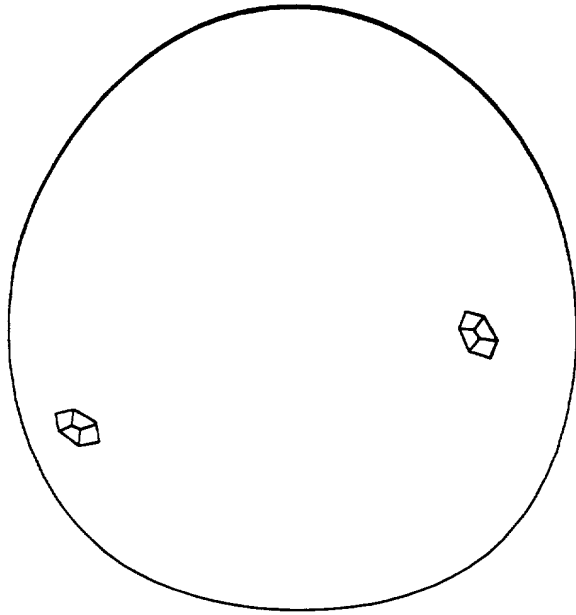


FIG. 10A

FIG. 10B is a schematic diagram of a system 1000, including a container 1002, a plurality of particles 1004, and a fluid 1006.

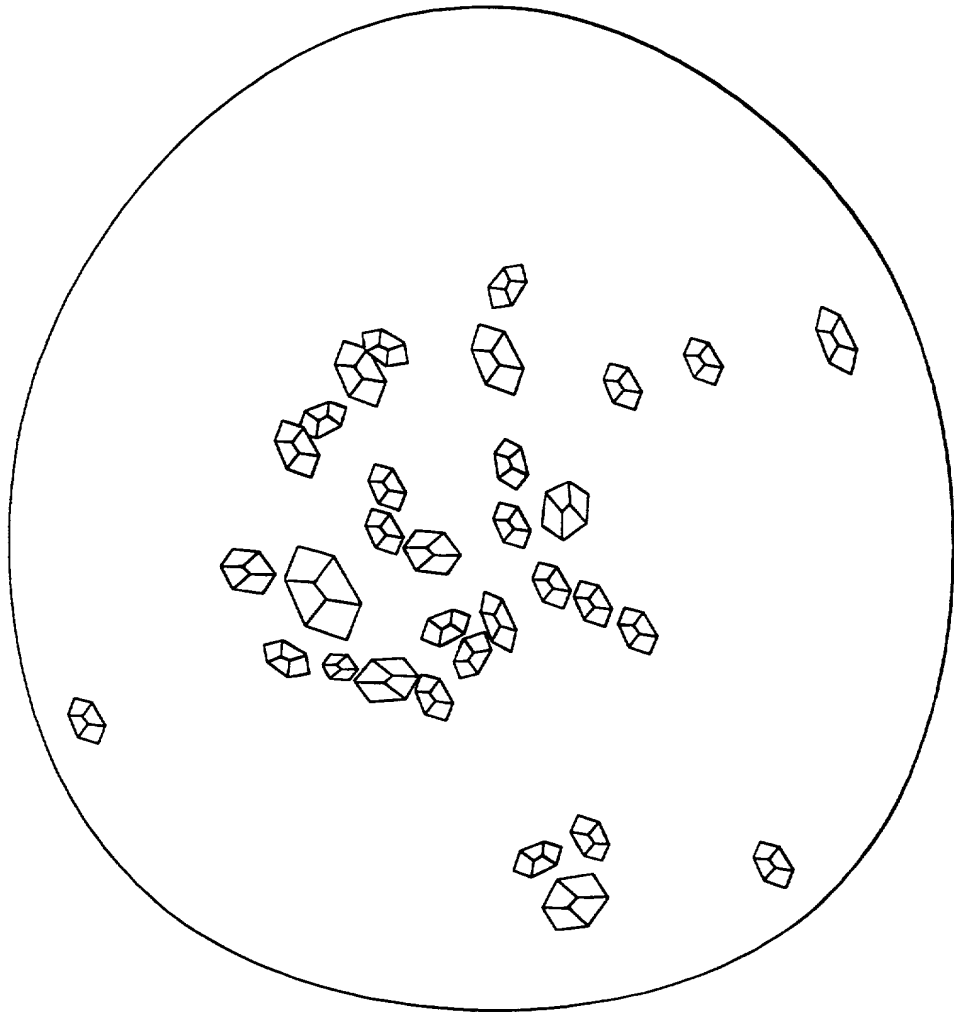


FIG. 10B

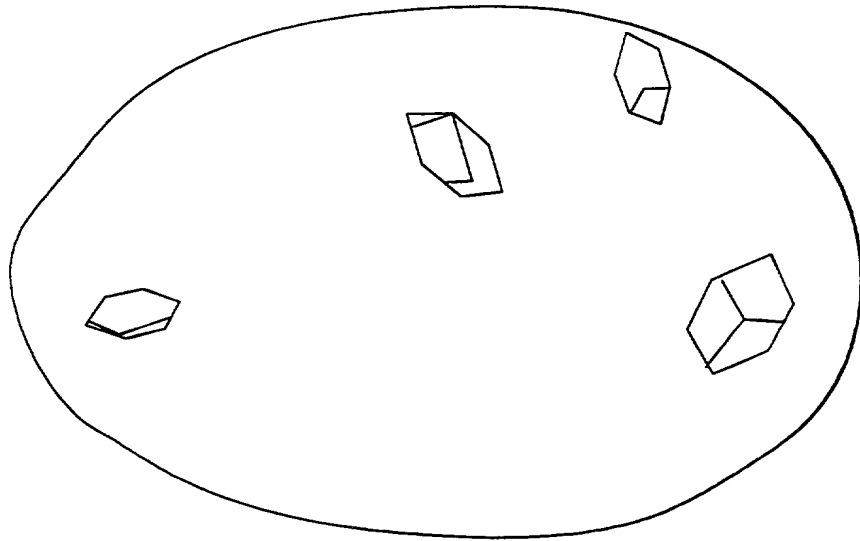


FIG. 10C



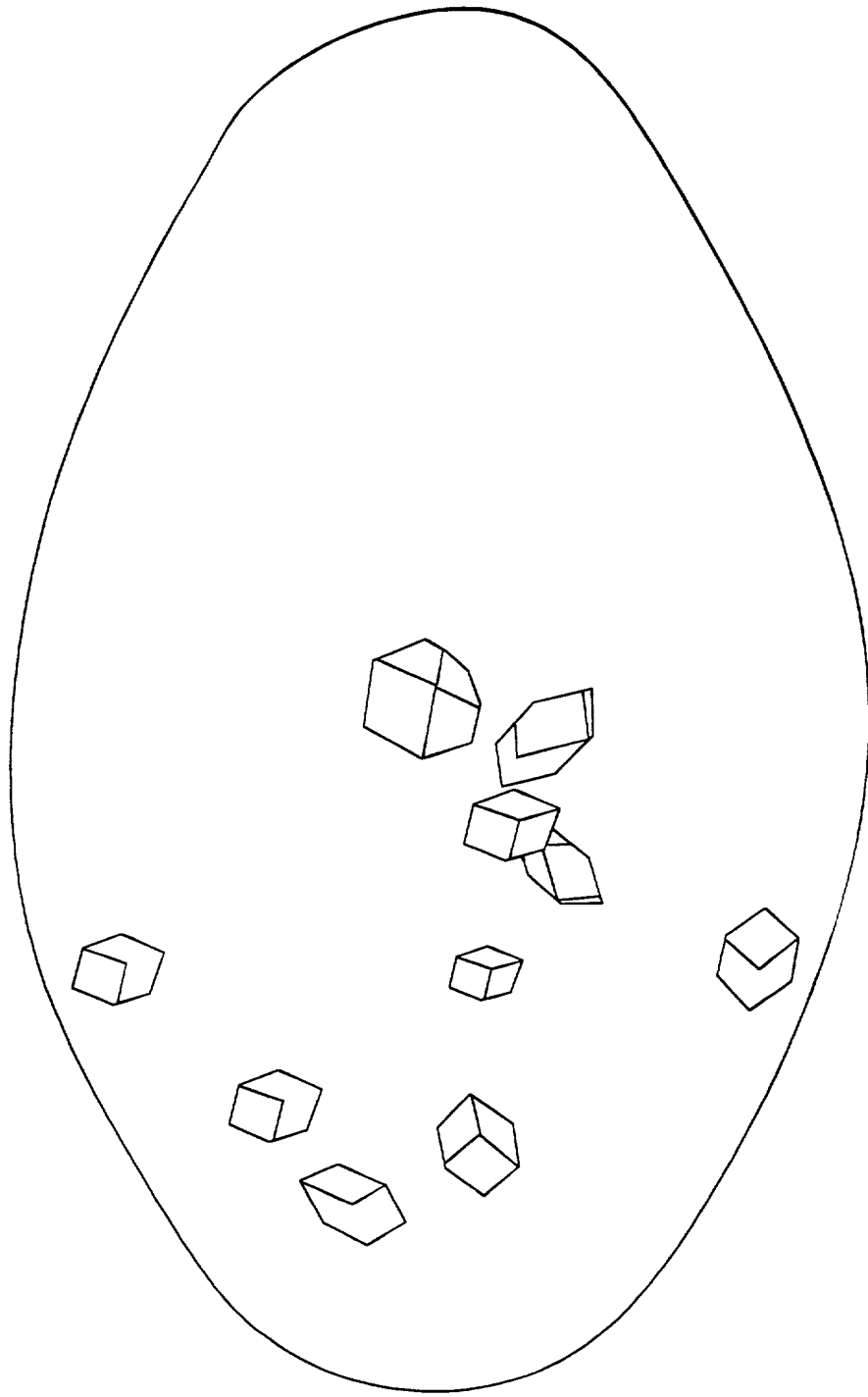


FIG. 10D

Concentration of $\text{CaCl}_2$ (mM)	pH	4.1	4.3	4.5	4.7	4.9	5.1
12.5		1.6 A 8.3 B 75.0 C 19.3 D 145.8 W	1.6 A 8.3 B 75.0 C 16.9 D 148.3 W	1.6 A 8.3 B 75.0 C 14.1 D 151.0 W	1.6 A 8.3 B 75.0 C 11.4 D 153.7 W	1.6 A 8.3 B 75.0 C 8.7 D 156.4 W	1.6 A 8.3 B 75.0 C 6.3 D 158.8 W
17.5		2.2 A 8.3 B 75.0 C 19.3 D 145.2 W	2.2 A 8.3 B 75.0 C 16.9 D 147.6 W	2.2 A 8.3 B 75.0 C 14.1 D 150.3 W	2.2 A 8.3 B 75.0 C 11.4 D 153.1 W	2.2 A 8.3 B 75.0 C 8.7 D 155.8 W	2.2 A 8.3 B 75.0 C 6.3 D 158.2 W
22.5		2.8 A 8.3 B 75.0 C 19.3 D 144.6 W	2.8 A 8.3 B 75.0 C 16.9 D 147.0 W	2.8 A 8.3 B 75.0 C 14.1 D 149.7 W	2.8 A 8.3 B 75.0 C 11.4 D 152.5 W	2.8 A 8.3 B 75.0 C 8.7 D 155.2 W	2.8 A 8.3 B 75.0 C 6.3 D 157.6 W
27.5		3.4 A 8.3 B 75.0 C 19.3 D 143.9 W	3.4 A 8.3 B 75.0 C 16.9 D 146.4 W	3.4 A 8.3 B 75.0 C 14.1 D 149.1 W	3.4 A 8.3 B 75.0 C 11.4 D 151.9 W	3.4 A 8.3 B 75.0 C 8.7 D 154.5 W	3.4 A 8.3 B 75.0 C 6.3 D 157.0 W

A = volume of 2M  $\text{CaCl}_2$   
 B = volume of 3M NaOAc  
 C = volume of 100% MPD  
 D = volume of 1M HCl  
 W = volume of 100% water

FIG. 11

## Crystal Screen 2 Reagent Formulations

1. 10% PEG 6000 , 2.0 M Na chloride
2. 0.5 M NaCl, 0.01 M CTAB, 0.01 M Mg chloride
3. 25% Ethylene glycol
4. 35% Dioxane
5. 5% Isopropanol, 2.0 M Ammonium sulfate
6. 1.0 M Imidazole pH 7.0
7. 10% PEG 1000, 10% PEG 8000
8. 10% Ethanol, 1.5 M Na chloride
9. 2.0 M Na chloride, 0.1 M Na acetate pH 4.6
10. 30% MPD, 0.1 M Na Acetate pH 4.6, 0.2 M NaCl
11. 1.0 M 1,6 Hexanediol, 0.1 M Na Acetate pH 4.6, 0.01 M Co chloride
12. 30% PEG 400, 0.1 M Na acetate pH 4.6, 0.1 M Cd chloride
13. 30% PEG MME 2000, 0.1 M Na Acetate pH 4.6, 0.2 M Ammonium sulfate
14. 2.0 M Ammonium sulfate, 0.1 M Na Citrate pH 5.6, 0.2 M K/Na Tartrate
15. 1.0 M Li sulfate, 0.1 M Na Citrate pH 5.6, 0.5 M Ammonium sulfate
16. 2% Polyethyleneimine, 0.1 M Na Citrate pH 5.6, 0.5 M NA chloride
17. 35% tert-butanol, 0.1 M Na citrate pH 5.6
18. 10% Jeffamine M-600, 0.1 M Na citrate pH 5.6, 0.01 M Ferric chloride
19. 2.5 M 1,6 Hexanediol, 0.1 M Na citrate pH 5.6
20. 1.6 M Mg sulfate, 0.1 M MES pH 6.5
21. 2.0 M Na chloride, 0.1 M MES pH 6.5, 0.2 M Na/K Phosphate
22. 12% PEG 20,000, 0.1 M MES pH 6.5
23. 10% Dioxane, 0.1 M MES pH 6.5, 1.6 M Ammonium sulfate
24. 30% Jeffamine M-600, 0.1 M MES pH 6.5, 0.05 M Cs chloride

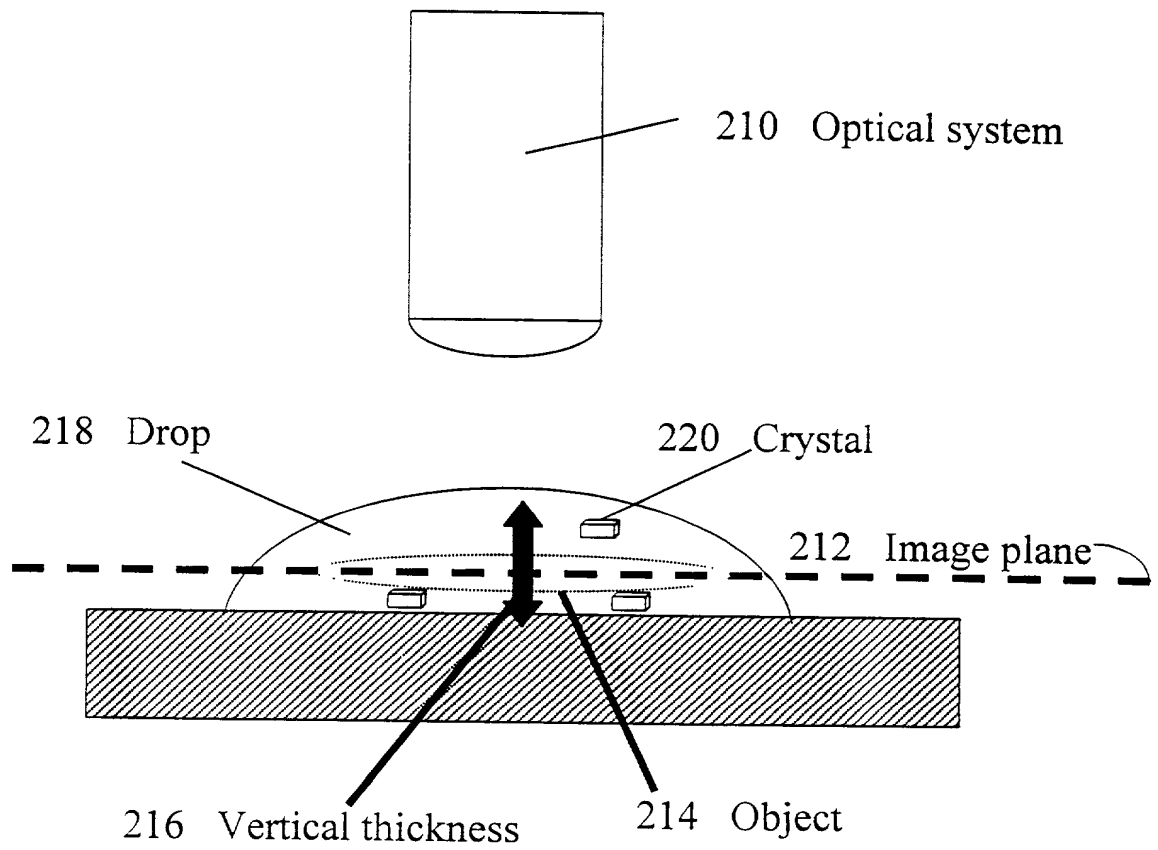
**FIG. 11**  
(Continued)

## Crystal Screen 2 Reagent Formulations

25. 1.8 M Ammonium sulfate, 0.1 M MES pH 6.5, 0.01 M Co chloride
26. 30% PEG MME 5000, 0.1 M MES pH 6.5, 0.2 M Ammonium sulfate
27. 25% PEG MME 550, 0.1 M MES pH 6.5, 0.01 M Zn sulfate
28. 1.6 M Sodium citrate pH 6.5
29. 30% MPD, 0.1 M Hepes pH 7.5, 0.5 M Ammonium sulfate
30. 10% PEG 6000, 0.1 M Hepes pH 7.5, 5% MPD
31. 20% Jeffamine M-600, 0.1 M Hepes pH 7.5
32. 1.6 M Ammonium sulfate, 0.1 M Hepes pH 7.5, 0.1 M Na chloride
33. 2.0 M Ammonium formate, 0.1 M Hepes pH 7.5
34. 1.0 M Na acetate, 0.1 M Hepes pH 7.5, 0.05 M Cd sulfate
35. 70% MPD, 0.1 M Hepes pH 7.5
36. 4.3 M Na chloride, 0.1 M Hepes pH 7.5
37. 10% PEG 8000, 0.1 M Hepes pH 7.5, 8% Ethylene glycol
38. 20% PEG 10,000, 0.1 M Hepes pH 7.5
39. 3.4 M 1,6 Hexanediol, 0.1 M Tris pH 8.5, 0.2 M Mg chloride
40. 25% tert-butanol, 0.1 M Tris pH 8.5, 0.1 M Ca chloride
41. 1.0 M Li sulfate, 0.1 M Tris pH 8.5, 0.01 M Ni chloride
42. 12% Glycerol, 0.1 M Tris pH 8.5, 1.5 M Ammonium sulfate
43. 50% MPD, 0.1 M Tris pH 8.5, 0.2 M Ammonium phosphate
44. 20% Ethanol, 0.1 M Tris pH 8.5
45. 20% PEG MME 2000, 0.1 M Tris pH 8.5, 0.01 M Ni chloride
46. 30% PEG MME 550, 0.1 M Bicine pH 9.0, 0.1 M Na chloride
47. 2.0 M Mg chloride, 0.1 M Bicine pH 9.0
48. 10% PEG 20,000, 0.1 M Bicine pH 9.0, 2% Dioxane

**FIG. 11**  
(Continued)

**FIGURE 12A**



**FIGURE 12B**

